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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/728,968	12/08/2003	Kia Silverbrook	ZG185US	9046
24011	7590	06/13/2005	EXAMINER	
SILVERBROOK RESEARCH PTY LTD 393 DARLING STREET BALMAIN, 2041 AUSTRALIA			WILLIAMS, KEVIN D	
			ART UNIT	PAPER NUMBER
			2854	

DATE MAILED: 06/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/728,968	Applicant(s) SILVERBROOK, KIA	
	Examiner Kevin D. Williams	Art Unit 2854	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 20 is/are rejected.
- 7) ☒ Claim(s) 12-19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>12/8/2003</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-20 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of copending Application No. 10/728926 in view of U.S. Patent No. 5,500,661 to Matsubara. The claims of Application No. 10/728926 disclose all of the limitations in the claims of the instant application except for the chassis supporting two spaced apart bearing moldings between which extend a feed roller and an exit roller.

Matsubara discloses a chassis (frame of printer in Fig. 1) supporting two spaced apart bearing moldings (where rollers 704,705 connect to frame) between which extend a feed roller 705 and an exit roller 704.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the claims of Application No. 10/728926 to have the chassis and

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rollers as taught by Matsubara, in order to accurately feed the printing media to the printing device.

This is a provisional obviousness-type double patenting rejection.

3. Claims 1-20 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of copending Application No. 10/728936 in view of U.S. Patent No. 5,500,661 to Matsubara. The claims of Application No. 10/728936 disclose all of the limitations in the claims of the instant application except for the chassis supporting two spaced apart bearing moldings between which extend a feed roller and an exit roller.

Matsubara discloses a chassis (frame of printer in Fig. 1) supporting two spaced apart bearing moldings (where rollers 704,705 connect to frame) between which extend a feed roller 705 and an exit roller 704.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the claims of Application No. 10/728936 to have the chassis and rollers as taught by Matsubara, in order to accurately feed the printing media to the printing device.

This is a provisional obviousness-type double patenting rejection.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 2, 5, 9-11, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boyd (US 6,322,206) in view of Matsubara (US 5,500,661).

Boyd teaches a printhead chassis assembly for a chip based printhead, comprising: a chassis 20 supporting a duct cover (bottom wall of 12 as shown in Fig. 2) in which is formed a number of inlet ports (col. 4, lines 41-45) which are adapted to receive liquid ink; the duct cover sealing against a distribution molding, the distribution molding having a longitudinal axis and a number of elongated ducts 202,204,206 running in parallel along the axis, each duct being associated with a port; all of the ducts are sealed against and in fluid communication with an upper layer 72 of a laminated ink distribution structure; the laminated ink distribution structure having a first layer 72 in which is formed a number of first holes 86, each first hole being in registry with a lower duct portion; the laminated ink distribution structure having a number of subsequent layers 73, each subsequent layer having vertical passages (Figs. 13-16) and transverse channels (Figs. 13-16) for bringing a fluid from a duct, via the first layer, to one of a number of printhead chips 30 located as an array in a chip restraining layer; the chips arranged to print onto a sheet of media, a subsequent layer in the laminated ink distribution structure comprising, in part, an electrically conductive film 64 having one end which is electrically connected to the chips; the film extending out of the laminated ink distribution structure to make electrical contact with a printhead controlling printed circuit board 22, a subsequent layer comprising a final layer in which is formed an array of chip slots 84 for receiving the printhead chips; the conductive film being retained

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between the final layer and an adjacent layer, each chip being associated with a nozzle guard 30 assembly in which is formed an array of microapertures that are aligned with nozzles carried by the chips, so that the ink drops ejected at high speed from the nozzle array passes through the microapertures, the printhead having a longitudinal axis and the individual printhead chips and the slots in the final layer are arranged at an angle to the longitudinal axis of the printhead, with a slight overlap (Fig. 2) between each print chip which enables continuous transmission of ink over the entire length of the array, the distribution molding being located between the duct cover and the laminated ink distribution structure within a chassis 20; subsequent layers in the laminated ink distribution structure having between them an electrically conductive film having one end which is electrically connected to the chips; the film extending out of the laminated ink distribution structure to make electrical contact with a printhead controlling printed circuit board which is carried by the chassis, a film backing pad which maintains the film in electrical contact with an undersurface of the printed circuit board, and recesses for accommodating a conductive film being formed into the final layer and lead to each of the slots (Fig. 4).

Boyd does not teach a chassis which supports two spaced apart bearing moldings between which extend a feed roller and an exit roller.

Matsubara teaches a printhead chassis assembly comprising a chassis (frame of printer in Fig. 1) which supports two spaced apart bearing moldings (where rollers 704,705 connect to frame) between which extend a feed roller 705 and an exit roller 704.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Boyd to have the chassis and rollers as taught by Matsubara, in order to accurately feed the printing media to the printing device.

6. Claims 3, 4, 6, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boyd in view of Matsubara as applied to claims 1, 2, 5, 9-11, and 20 above, and further in view of Miura (US 4,555,717).

Boyd in view of Matsubara teaches the claimed invention except for the laminated ink distribution structure further comprising a laminated manifold for distributing liquids and air to a number of delivery locations associated with each of the printhead chips, the first layer and subsequent layers further comprising air distribution passages which carry compressed air to a location near a nozzle array formed in each of the printhead chips, and the first layer and subsequent layers further comprising air distribution passages which carry compressed air for discharge at locations between each of the printhead chips and the nozzle guards.

Miura teaches a printing device comprising a laminated ink distribution structure having a laminated manifold (Fig. 11a) for distributing liquids and air to a number of delivery locations associated with each of the printhead chips, the first layer and subsequent layers comprise air distribution passages 7,9 which carry compressed air to a location near a nozzle array formed in each of the printhead chips, and the first layer and subsequent layers comprise air distribution passages which carry compressed air for discharge at locations between each of the printhead chips and the nozzle guards.

It would have been obvious to one of ordinary skill in the art at the time of the invention to additionally modify Boyd to have the air passages as taught by Miura, in order to provide an effective and durable means of ejecting the ink from the printheads.

7. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Boyd in view of Matsubara as applied to claims 1, 2, 5, 9-11, and 20 above, and further in view of Waller (US 6,250,738).

Boyd in view of Matsubara teaches the claimed invention except for the distribution structure comprising layers of a micro-molded acetal plastic forming a distribution stack.

Waller teaches a distribution structure comprising layers of a micro-molded acetal plastic forming a distribution stack (col. 8, lines 19-21).

It would have been obvious to one of ordinary skill in the art at the time of the invention to additionally modify Boyd to have the micro molded plastic as taught by Waller, in order to utilize a durable yet inexpensive material for the distribution structure.

Allowable Subject Matter

8. Claims 12-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The primary reason for the indication of the allowability of claim 12 is the limitation of an air duct within which is located an air valve molding with a series of

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apertures, the apertures corresponding to air passages formed in the air duct so that the apertures can be brought into and out of alignment with the passages to selectively allow pressurized air through, in combination with the other claimed structure.


Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin D. Williams whose telephone number is (571) 272-2172. The examiner can normally be reached on Monday - Friday, 8:30am - 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew H. Hirshfeld can be reached on (571) 272-2168. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KDW
June 8, 2005


ANDREW H. HIRSHFELD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800